

Bette Tina Marie Korber

## **Publications**

178 scientific papers (published and in press), and still no vaccine. Back to work.

## **Peer Reviewed Papers and Invited Chapters**

### **Submitted or in press:**

1. Bulla I, Schultz A, Schreiber F, Zhang M, Leitner T, Korber B, Morgenstern B, Stanke M. HIV Classification Using Coalescent Theory. Under review, Bioinformatics. 2009.
2. Athreya G, Berry I, KothariM, Daniels M, Bruno W, Korber B, Kuiken C, Leiter T. A simple method for optimizing the root and evolutionary rate in phylogenetic trees with taxa collected at a minimum of two different time points. Near submission for Bioinformatics, 2008.
3. Tsibris A, Korber B, Arnaout R, Russ C, Lo C-C, Leitner T, Gaschen B, Theiler J, Paredes R, Su Z, Hughes M, Gulick R, Greaves W, Coakley E, Flexner C, Nusbaum C, Kuritzkes D. Tracking Dynamic HIV-1 Escape from CCR5 Antagonist Therapy *in vivo* by Deep Sequencing. Review, PloS Genetics, 2008.
4. Ha Youn Lee, Elena E. Giorgi, Brandon F. Keele, Brian Gaschen1, Gayathri S.Athreya1, Jesus F. Salazar-Gonzalez, Kimmy T. Pham, Paul A. Goepfert, J. Michael Kilby, Michael S. Saag, Eric L. Delwart, Michael P. Busch, Beatrice H. Hahn, George M. Shaw, Bette T. Korber, Tanmoy Bhattacharya and Alan S. Perelson. Modeling Sequence Evolution in Acute HIV-1 Infection. Under review, PLoS Computational Biology, Dec. 2008
5. Natasha Wood, Tanmoy Bhattacharya, Brandon F. Keele, Elena Giorgi, Michael Liu, Brian Gaschen, Marcus Daniels, Guido Ferrari, Barton F. Haynes, Andrew McMichael, George M. Shaw, Beatrice H. Hahn, Bette Korber, Cathal Seoighe . HIV evolution in early infection: selection pressures, patterns of insertion and deletions, and the impact of Apobec. Manuscript under review, PLoS Computational Biology, Dec 2008.
6. Brandon F. Keele, Hui Li, Gerald H. Learn<sup>1</sup>, Elena E. Giorgi, Peter Hrabr, Truman Grayson, Chuanxi Sun, Wendy W. Yeh, Norman L. Letvin, Gary J. Nabel, Barton F. Haynes, Tanmoy Bhattacharya, Alan S. Perelson, Bette T. Korber, Beatrice H. Hahn and George M. Shaw. Low Dose Rectal Inoculation of Rhesus Macaques by SIVsmE660 or SIVmac251 Recapitulates Human Mucosal Infection by HIV-1. (Submitted, JEM. 2008)
7. Nilu Goonetilleke, Michael.K.P. Liu, Jesus F. Salazar-Gonzalez, Guido Ferrari, Emma L. Turnbull, Maria G. Salazar, Brandon F. Keele, Kent J. Weinhold, Stephen Moore, CHAVI Clinical Core B, Norman Letvin, Barton F. Haynes, Myron S. Cohen, Bette T. Korber, Beatrice H. Hahn, Persephone Borrow, George M. Shaw

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- and Andrew J. McMichael. The Lost T cells of Acute HIV Infection; transient responses to escaping epitopes as virus load falls. (Near submission, JEM. 2008)
8. Jesus F. Salazar-Gonzalez, Maria G. Salazar, Brandon F. Keele, Gerald H. Learn, Hui Li, Julie M. Decker, Shuyi Wang, Joshua Baalwa, Matthias H. Kraus, Nicholas F. Parrish, Katharina S. Shaw, M. Brad Guffey, Katharine J. Bar, Katie L. Davis, Christina Ochsenbauer-Jambor, John C. Kappes, Michael S. Saag, Myron S. Cohen, Cynthia A. Derdeyn, Susan Allen, Eric Hunter, Martin Markowitz, Elena E. Giorgi, Peter Hraber, Alan S. Perelson, Tanmoy Bhattacharya, Barton F. Haynes, Bette T. Korber, Beatrice H. Hahn, George M. Shaw. Single Genome Amplification of Full-length HIV-1 Sequences in Acute and Early Infection Reveals the Genetic Identity, Biological Phenotype, and Precise Evolutionary Pathways of Transmitted/Founder Viruses and Their Progeny, (Near submission, JEM. 2008)
  9. Wing Pui Kong, Lan Wu, Tim Wallstrom, Will Fischer, Zhi-Yong Yang, Sung-Youl Ko, Norman Letvin, Barton Haynes, Beatrice Hahn, Bette Korber and Gary J. Nabel. Expanded Breadth of the T-cell Response to Mosaic HIV-1 Envelope DNA Vaccination. In Press, JV.
  10. Bette Korber, Norman Letvin, and Barton Haynes. Evolving T-Cell Vaccine Strategies for HIV, the Virus with a Thousand Faces. Review, Journal of Virology, Jan. 2009.

## Published

11. Santra S, Korber BT, Muldoon M, Barouch DH, Nabel GJ, Gao F, Hahn BH, Haynes BF, Letvin NL. A centralized gene-based HIV-1 vaccine elicits broad cross-clade cellular immune responses in rhesus monkeys. Proc Natl Acad Sci U S A. 2008 Jul 23. [PMID: 18650391](#)
12. Thurmond J, Yoon H, Kuiken C, Yusim K, Perkins S, Theiler J, Bhattacharya T, Korber B, Fischer W. Web-based design and evaluation of T-cell vaccine candidates. Bioinformatics. 2008 Jul 15; 24(14):1639-40. Epub 2008 May 29. [PMID: 18515277](#)
13. Eun-Young Kim , Jennifer Stanton, Kendall Krebs, Kevin Kunstman, Samuel Wu, John P. Phair , Bette T. M. Korber, Chad A. Mirkin, and Steven M. Wolinsky. Detection of HIV-1 p24 Gag in Plasma by a Nanoparticle-based Bio-Barcode Amplification Method. Nanomed. 2008 Jun;3(3):293-303. [PMID: 18510425](#).
14. Rousseau CM, Daniels MG, Carlson JM, Kadie C, Crawford H, Prendergast A, Matthews P, Payne R, Rolland M, Raugi DN, Maust BS, Learn GH, Nickle DC, Coovadia H, Ndung'u T, Frahm N, Brander C, Walker BD, Goulder PJ,

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- Bhattacharya T, Heckerman DE, Korber BT, Mullins JI. HLA class I-driven evolution of human immunodeficiency virus type 1 subtype c proteome: immune escape and viral load. *J Virol.* 2008 Jul;82(13):6434-46. Epub 2008 Apr 23. [PMID: 18434400](#)
15. Keele BF, Giorgi EE, Salazar-Gonzalez JF, Decker JM, Pham KT, Salazar MG, Sun C, Grayson T, Wang S, Li H, Wei X, Jiang C, Kirchherr JL, Gao F, Anderson JA, Ping LH, Swanstrom R, Tomaras GD, Blattner WA, Goepfert PA, Kilby JM, Saag MS, Delwart EL, Busch MP, Cohen MS, Montefiori DC, Haynes BF, Gaschen B, Athreya GS, Lee HY, Wood N, Seoighe C, Perelson AS, Bhattacharya T, Korber BT, Hahn BH, Shaw GM. Identification and characterization of transmitted and early founder virus envelopes in primary HIV-1 infection. *Proc Natl Acad Sci USA.* 2008 May 27;105(21):7552-7. Epub 2008 May 19. [PMID: 18490657](#)
16. Frahm N, Nickle DC, Linde CH, Cohen DE, Zuñiga R, Lucchetti A, Roach T, Walker BD, Allen TM, Korber BT, Mullins JI, Brander C. Increased detection of HIV-specific T cell responses by combination of central sequences with comparable immunogenicity. *AIDS.* 2008 Feb 19;22(4):447-56. [PMID: 18301057](#)
17. Fischer W, Liao HL, Haynes B, Letvin N, Korber B. Coping with Viral Diversity in HIV Vaccine Design: a Response to Nickle et al. *PLoS Comput Biol.* 2008 Jan; 4(1):e15. [PMID: 18225944](#)
18. Jesus Salazar-Gonzalez, Kimmy T. Pham, Elizabeth Bailes, Maria G. Salazar, Brandon F. Keele, Cynthia A. Derdeyn, Paul Farmer, Eric Hunter, Susan Allen, Jeffrey Anderson, Ronald Swanstrom, Gayathri S. Athreya, Bette T.M. Korber, George M. Shaw, Paul M. Sharp, and Beatrice H. Hahn. Characterizatino of Envelope Diversity by Single Genome Amplification in Zambian Patients with Primary Human Immunodeficiency Virus Type 1 Infection. *J Virol.* Apr;82(8):3952-70 2008 Feb 6 [Epub ahead of print]. [PMID: 18256145](#)
19. Ngumbela KC, Day CL, Mncube Z, Nair K, Ramduth D, Thobakgale C, Moodley E, Reddy S, de Pierres C, Mkhwanazi N, Bishop K, van der Stok M, Ismail N, Honeyborne I, Crawford H, Kavanagh DG, Rousseau C, Nickle D, Mullins J, Heckerman D, Korber B, Coovadia H, Goulder PJR and Walker BD. Targeting of a CD8 T cell Env epitope presented by HLA-B\*5802 is associated with markers of HIV disease progression and lack of selection pressure. *AIDS Research Human Retroviruses. AIDS Res Hum Retroviruses.* 2008 Jan;24(1):72-82. [PMID: 18275350](#)
20. Frahm N, Kaufmann DE, Yusim K, Muldoon M, Kesmir C, Linde CH, Fischer W, Allen TM, Li B, McMahon BH, Faircloth KL, Hewitt HS, Mackey EW, Miura T, Khatri A, Wolinsky S, McMichael A, Funkhouser RK, Walker BD, Brander C, Korber BT. Increased sequence diversity coverage improves detection of HIV-

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- specific T cell responses. *J Immunol.* 2007 Nov 15;179(10):6638-50. [PMID: 17982054](#)
21. Gao F, Liao HX, Hahn BH, Letvin NL, Korber BT, Haynes BF. Centralized HIV-1 envelope immunogens and neutralizing antibodies. *Curr HIV Res.* 2007 Nov;5(6):572-7. [PMID: 18045113](#)
22. Frahm N, Yusim K, Suscovich TJ, Adams S, Sidney J, Hraber P, Hewitt HS, Linde CH, Kavanagh DG, Woodberry T, Henry LM, Faircloth K, Listgarten J, Kadie C, Jojic N, Sango K, Brown NV, Pae E, Zaman MT, Bihl F, Khatri A, John M, Mallal S, Marincola FM, Walker BD, Sette A, Heckerman D, Korber BT, Brander C. Extensive HLA class I allele promiscuity among viral CTL epitopes. *Eur J Immunol.* 2007 Sep;37(9):2419-33. [PMID: 17705138](#)
23. Letourneau S, Im E-J, Mashimi T, Brereton C, Bridgeman A, Yang H, Dorrell L, Dong T, Korber B, McMichael AJ, Hanke T. Design and pre-clinical evaluation of a universal HIV vaccine. *PLoS ONE.* 2007 Oct 3;2(10):e984. [PMID: 17912361](#)
24. Korber B, Miller C, and Leitner T. HIV subtypes, antigenic diversity and vaccine design. Invited review in: AIDS Vaccine Development. Editors Wayne Koff, Patricia Kahn, and Ian D. Gust. pp65-74. Caister Academic Press, Norfolk, UK, 2007
25. Brumme ZL, Brumme CJ, Heckerman D, Korber BT, Daniels M, Carlson J, Kadie C, Bhattacharya T, Chui C, Szinger J, Mo T, Hogg RS, Montaner JS, Frahm N, Brander C, Walker BD, Harrigan PR. *PLoS Pathog.* 2007 Jul 6;3(7):e94 [Epub ahead of print] [PMID: 17616974](#)
26. William Fischer, Simon Perkins, James Theiler, Tanmoy Bhattacharya, Karina Yusim, Robert Funkhouser, Carla Kuiken, Barton Haynes, Norman L. Letvin, Bruce D. Walker, Beatrice H. Hahn, Bette Korber. Designing polyvalent HIV-1 vaccines for optimal coverage of potential T-cell epitopes in diverse global variants. *Nat Med.* 2007 Jan;13(1):100-6. Epub 2006 Dec 24 [PMID: 17187074](#)
27. Gnanakaran S, Lang D, Daniels M, Bhattacharya T, Derdeyn CA, Korber B. Clade-specific differences between human immunodeficiency virus type 1 clades B and C: diversity and correlations in C3-V4 regions of gp120. *J Virol.* 2007 May;81(9):4886-91. Epub 2006 Dec 13. [PMID: 17166900](#)
28. R. Rong, S. Gnanakaran, JM Decker, JN Sfakianos, JL Mokili, M Muldoon, J Mulenga, S Allen, JL Blackwell, BT Korber, E Hunter, and CA Derdeyn. Unique Mutational Patterns in the Envelope a2 Amphipathic Helix and Acquisition of Length in gp120 Hyper-variable Domains are Associated with Resistance to Autologous Neutralization of Subtype C Human Immunodeficiency Virus type 1. LA-UR NUMBER 07-0504. *J Virol.* 2007 Mar 14; Jun;81(11):5658-68. Epub 2007 Mar 14. [PMID: 17360739](#)

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29. Rousseau CM, Learn GH, Bhattacharya T, Nickle DC, Heckerman D, Chetty S, Brander C, Goulder PJ, Walker BD, Kiepiela P, Korber BT, Mullins JI. Extensive Intra-subtype Recombination in South African HIV-1 Subtype C Infections. *J Virol.* 2007 May;81(9):4492-500. Epub 2007 Feb 21J Virol. 2007 Feb 21. [PMID: 17314156](#)
30. Brander C, Self S, and Korber B. Capturing viral diversity for *in vitro* test reagents and HIV vaccine immunogen design. Invited review, *Curr Opin HIV AIDS*, 2006 May 2(3):183-188. [Abstract](#)
31. Hraber PT, Korber BT, Wolinsky S, Erlich H, Trachtenberg E, Kepler TB. HLA and HIV infection progression: application of the minimum description length principle to statistical genetics. Maglaveras N, IChouvarda I, Koutkias V, and Brause R (Eds), ISBMDA 2006, Lecture Notes in Bioinformatics (LNBI) 4345:1-12, 2006.
32. Bhattacharya T, Daniels M, Heckerman D, Foley B, Frahm N, Kadie C, Carlson J, Yusim K, McMahon B, Gaschen B, Mallal S, Mullins JI, Nickle DC, Herbeck J, Rousseau C, Learn GH, Miura T, Brander C, Walker B, Korber B. Founder Effects in the Assessment of HIV Polymorphisms and HLA Allele Associations. *Science.* 2007 Mar 16;315(5818):1583-6. [PMID: 17363674](#)
33. Timm J, Li B, Daniels MG, Bhattacharya T, Reyor LL, Allgaier R, Kuntzen T, Fischer W, Nolan BE, Duncan J, Schulze zur Wiesch J, Kim AY, Frahm N, Brander C, Chung RT, Lauer GM, Korber BT, Allen TM. Human leukocyte antigen-associated sequence polymorphisms in hepatitis C virus reveal reproducible immune responses and constraints on viral evolution. *Hepatology.* 2007 Aug;46(2):339-49. [PMID: 17559151](#).
34. S. Gnanakaran, Dorothy Lang, Marcus Daniels, Tanmoy Bhattacharya, Cynthia Derdeyn and Bette Korber. Clade Specific Differences in HIV-1: Diversity and Correlations in C3-V4 Regions of gp120. *J Virol.* 2007 May;81(9):4886-91. Epub 2006 Dec 13. [PMID: 17166900](#)
35. Ahuja SK, Aiuti F, Berkout B, Biberfeld P, Burton DR, Colizzi V, Deeks SG, Desrosiers RC, Dierich MP, Doms RW, Emerman M, Gallo RC, Girard M, Greene WC, Hoxie JA, Hunter E, Klein G, Korber B, Kuritzkes DR, Lederman MM, Malim MH, Marx PA, McCune JM, McMichael A, Miller C, Miller V, Montagnier L, Montefiori DC, Moore JP, Nixon DF, Overbaugh J, Pauza CD, Richman DD, Saag MS, Sattentau Q, Schooley RT, Shattock R, Shaw GM, Stevenson M, Trkola A, Wainberg MA, Weiss RA, Wolinsky S, Zack JA. A plea for justice for jailed medical workers. *Science.* 2006 Nov 10;314(5801):924-5. Epub 2006 Oct 24. No abstract available. [PMID: 17062652](#)

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36. Kothe DL, Decker JM, Li Y, Weng Z, Bibollet-Ruche F, Zammit KP, Salazar MG, Chen Y, Salazar-Gonzalez JF, Moldoveanu Z, Mestecky J, Gao F, Haynes BF, Shaw GM, Muldoon M, Korber BT, Hahn BH. Antigenicity and immunogenicity of HIV-1 consensus subtype B envelope glycoproteins. *Virology*. Mar 30;360(1):218-34. Epub 2006 Nov 13. [PMID: 17097711](#)
  
37. Li M, Salazar-Gonzalez JF, Derdeyn CA, Morris L, Williamson C, Robinson JE, Decker JM, Li Y, Salazar MG, Polonis VR, Mlisana K, Karim SA, Hong K, Greene KM, Bilska M, Zhou J, Allen S, Chomba E, Mulenga J, Vwalika C, Gao F, Zhang M, Korber BT, Hunter E, Hahn BH, Montefiori DC. Genetic and neutralization properties of subtype C human immunodeficiency virus type 1 molecular env clones from acute and early heterosexually acquired infections in Southern Africa. *J Virol*. 2006 Dec;80(23):11776-90. Epub 2006 Sep 13. [PMID: 16971434](#)
  
38. Weaver EA, Lu Z, Camacho ZT, Moukdar F, Liao H-X, Ma B-J, Kepler T, Nabel GJ, Letvin NL, Korber BT, Hahn BH, Haynes BF and Gao F. Cross-subtype T Cell Immune Responses induced by an HIV-1 Group M Consensus Env Immunogen. *J Virol*. 2006 Jul;80(14):6745-56, 2006. [PMID: 16809280](#)
  
39. Liao HX, Sutherland LL, Xia SM, Brock ME, Scearce RM, VanLeeuwen S, Alam SM, McAdams M, Weaver EA, Camacho Z, Ma BJ, Li Y, Decker JM, Nabel GJ, Montefiori DC, Hahn BH, Korber BT, Gao F, Haynes B. A Group M Consensus Envelope Glycoprotein Induces Antibodies That Neutralize Subsets of Subtype B and C HIV-1 Primary Viruses. *Virology*, 2006 Sep 30;353(2):268-82., 2006.  
[PMID: 17039602](#)
  
40. Rousseau CM, Birditt BA, McKay AR, Stoddard JN, Lee TC, McLaughlin S, Moore SW, Shindo N, Learn GH, Korber BT, Brander C, Goulder PJ, Kiepiela P, Walker BD, Mullins JI. Large-scale amplification, cloning and sequencing of near full-length HIV-1 subtype C genomes. *J Virol Methods*. 2006 May 13 eprint.  
[PMID: 16701907](#)
  
41. Korber B, LaButé M, Yusim K. Invited review: Immunoinformatics Comes of Age. *PLoS Computational Biology*, *PLoS Comput Biol*. 2006 Jun 30;2(6):e71, 2006. [PMID: 16846250](#)
  
42. Zhang M, Schultz AK, Calef C, Kuiken C, Leitner T, Korber B, Morgenstern B, Stanke M. jpHMM at GOBICS: a web server to detect genomic recombinations in HIV-1. *Nucleic Acids Res*. 2006 Jul 1;34(Web Server issue):W463-5. [PMID: 16845050](#). LA-UR 06-1256
  
43. Anne-Kathrin Schultz , Ming Zhang , Thomas Leitner , Carla Kuiken , Bette Korber , Burkhard Morgenstern , Mario Stanke. A Jumping Profile Hidden Markov Model and Applications to Recombination Sites in HIV and HCV Genomes. *BMC Bioinformatics*. 2006 May 22;7(1):265. [PMID: 16716226](#).

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44. Dickover R, Garratty E, Yusim K, Miller C, Korber B, Bryson Y. Role of Maternal Autologous Neutralizing Antibody in Selective Perinatal Transmission of Human Immunodeficiency Virus Type 1 Escape Variants. *J Virol.* 2006 Jul;80(13):6525-33. [PMID: 16775339](#).
45. Kothe DL, Li Y, Decker JM, Bibollet-Ruche F, Zammit KP, Salazar MG, Chen Y, Weng Z, Weaver EA, Gao F, Haynes BF, Shaw GM, Korber B, Hahn B. Ancestral and Consensus Envelope Immunogens for HIV-1 Subtype C. *Virology.* 2006 Nov 9; [Epub ahead of print] [PMID: 17097711](#).
46. Lin HH, Gaschen BK, Collie M, El-Fishaway M, Chen Z, Korber BT, Beatrice ST, Zhang L. Genetic Characterization of Diverse HIV-1 Strains in an Immigrant Population Living in New York City. *J Acquir Immune Defic Syndr.* 2006 Apr 1;41(4):399-404. [PMID: 16652046](#)
47. Bihl F, Frahm N, Di Giammarino L, Sidney J, John M, Yusim K, Woodberry T, Sango K, Hewitt HS, Henry L, Linde CH, Chisholm JV 3rd, Zaman TM, Pae E, Mallal S, Walker BD, Sette A, Korber BT, Heckerman D, Brander C. Impact of HLA-B alleles, epitope binding affinity, functional avidity, and viral coinfection on the immunodominance of virus-specific CTL responses. *J Immunol.* 2006 Apr 1;176(7):4094-101. [PMID: 16547245](#)
48. Frahm N, Kiepiela P, Adams S, Linde CH, Hewitt HS, Sango K, Feeney ME, Addo MM, Lichterfeld M, Lahaie MP, Pae E, Wurcel AG, Roach T, St John MA, Altfeld M, Marincola FM, Moore C, Mallal S, Carrington M, Heckerman D, Allen TM, Mullins JI, Korber BT, Goulder PJ, Walker BD, Brander C. Control of human immunodeficiency virus replication by cytotoxic T lymphocytes targeting subdominant epitopes. *Nat Immunol.* 2006 Feb;7(2):173-8. Epub 2005 Dec 20. [PMID: 16369537](#)
49. Zuniga R, Lucchetti A, Galvan P, Sanchez S, Sanchez C, Hernandez A, Sanchez H, Frahm N, Linde CH, Hewitt HS, Hildebrand W, Altfeld M, Allen TM, Walker BD, Korber BT, Leitner T, Sanchez J, Brander C. Relative dominance of Gag p24-specific cytotoxic T lymphocytes is associated with human immunodeficiency virus control. *J Virol.* 2006 Mar;80(6):3122-5. [PMID: 16501126](#)
50. Ramanathan MP, Chambers JA, Taylor J, Korber BT, Lee MD, Nalca A, Dang K, Pankhong P, Attatippaholkun W, Weiner DB. Expression and evolutionary analysis of West Nile virus (Merion strain). *J Neurovirol.* 2005 Dec;11(6):544-56. [PMID: 16338748](#)
51. Yusim K, Richardson R, Tao N, Dalwani A, Agrawal A, Szinger J, Funkhouser R, Korber B, Kuiken C. Los alamos hepatitis C immunology database. *Appl Bioinformatics.* 2005;4(4):217-25. [PMID: 16309340](#) LAUR 04-7030

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52. Huang C-C, Tang M, Zhang M-Y, Majeed S, Montabana E, Stanfield RL, Dimitrov DS, Korber B, Sodroski J, Wilson IA, Wyatt R and Kwong PD. Structure of a V3 containing HIV-1 gp120 core. *Science*. 2005 Nov 11;310(5750):1025-8. [PMID: 16284180](#). LAUR#: 05-6889
53. Blay W, Gnanakaran S, Foley B, Doria-Rose N, Korber BT and Haigwood NL. Consistent Patterns of Change During Divergence of Human Immunodeficiency Virus Type 1 Envelope in SHIV Infected Macaques. *J Virol*. 2006 Jan;80(2):999-1014. [PMID: 16379001](#)
54. Haynes BF, Ma B, Montefiori DC, Wrin T, Petropoulos CJ, Sutherland LL, Scearce RM, Denton C, Xia SM, Korber BT, Liao HX. Analysis of HIV-1 subtype B third variable region peptide motifs for induction of neutralizing antibodies against HIV-1 primary isolates. *Virology*. 2006 Feb 5;345(1):44-55. Epub 2005 Oct 20. [PMID: 16242749](#)
55. Mokili J, Korber B. The Spread of HIV in Africa. *Journal of NeuroVirology*. J. NeuroVirology 2005. 11(suppl.1):66-75. [PMID: 15966105](#), LAUR#: 04-5753
56. Binley JM, Wrin T, Korber B, Zwick MB, Wang M, Chappay C, Stiegler G, Kunert R, Zolla-Pazner S, Katinger H, Petropoulos CJ, Burton DR. Comprehensive cross-clade neutralization analysis of a panel of anti-human immunodeficiency virus type 1 monoclonal antibodies. *J Virol*. 2004 Dec;78(23):13232-52. [PMID: 15542675](#)
57. Chohan B, Lang D, Sagar M, Korber B, Lavreys L, Richardson B, Overbaugh J. Selection for human immunodeficiency virus type 1 (HIV-1) envelope glycosylation variants occurs during transmission in certain risk groups and impacts viral RNA levels. *J Virol*. 2005 May;79(10):6528-31. [PMID: 15858037](#)
58. Frahm N, Adams S, Kiepiela P, Linde CH, Hewitt HS, Licherfeld M, Sango K, Brown NV, Pae E, Wurcel AG, Altfeld M, Feeney ME, Allen TM, Roach T, St John MA, Daar ES, Rosenberg E, Korber B, Marincola F, Walker BD, Goulder PJ, Brander C. HLA-B63 presents HLA-B57/B58-restricted cytotoxic T-lymphocyte epitopes and is associated with low human immunodeficiency virus load. *J Virol*. 2005 Aug;79(16):10218-25. [PMID: 16051815](#)
59. Hershberger KL, Kurian J, Korber BT, Letvin NL. Killer cell immunoglobulin-like receptors (KIR) of the African-origin sabaeus monkey: evidence for recombination events in the evolution of KIR. *Eur J Immunol*. 2005 Mar;35(3):922-35. [PMID: 15714591](#)
60. Leslie A, Kavanagh D, Honeyborne I, Pfafferott K, Edwards C, Pillay T, Hilton L, Thobakgale C, Ramduth D, Draenert R, Le Gall S, Luzzi G, Edwards A, Brander C, Sewell AK, Moore S, Mullins J, Moore C, Mallal S, Bhardwaj N, Yusim K, Phillips R, Klenerman P, Korber B, Kiepiela P, Walker B, Goulder P.

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- Transmission and accumulation of CTL escape variants drive negative associations between HIV polymorphisms and HLA. *J Exp Med.* 2005 Mar 21;201(6):891-902. [PMID: 15781581](#)
61. Taylor JE, Korber BT. HIV-1 intra-subtype superinfection rates: estimates using a structured coalescent with recombination. *Infect Genet Evol.* 2005 Jan;5(1):85-95. [PMID: 15567142](#)
  62. Yusim K, R Richardson, N Tao, J Szinger, R Funkhouser, B Korber, C Kuiken. The Los Alamos Hepatitis C Immunology Database (in press, Bioinformatics, January 2005). LAUR 04-7030
  63. Burton DR, Desrosiers RC, Doms RW, Feinberg MB, Gallo RC, Hahn B, Hoxie JA, Hunter E, Korber B, Landay A, Lederman MM, Lieberman J, McCune JM, Moore JP, Nathanson N, Picker L, Richman D, Rinaldo C, Stevenson M, Watkins DI, Wolinsky SM, Zack JA. A sound rationale needed for phase III HIV-1 vaccine trials. *Policy Forum, Science.* 2004 Jan 16;303(5656):316. [PMID: 14726576](#)
  64. Derdeyn, CA, Decker JM, Bibollet-Ruche F, Mokili JL, Muldoon M, Denham SA, Heil ML, Kasolo F, Musonda R, Hahn BH, Shaw GM, Korber BT, Allen S, Hunter E. Envelope-constrained neutralization-sensitive HIV-1 after heterosexual transmission. *Science.* 2004 Mar 26;303(5666):2019-22. [PMID: 15044802](#)
  65. Frahm N, Korber BT, Adams CM, Szinger JJ, Draenert R, Addo MM, Feeney ME, Yusim K, Sango K, Brown NV, SenGupta D, Piechocka-Trocha A, Simonis T, Marincola FM, Wurcel AG, Stone DR, Russell CJ, Adolf P, Cohen D, Roach T, StJohn A, Khatri A, Davis K, Mullins J, Goulder PJ, Walker BD, Brander C. Consistent CTL targeting of immunodominant regions in HIV across multiple ethnicities. *J Virol.* 2004 Mar;78(5):2187-2200. [PMID: 14963115](#)
  66. Gao F, Korber BT, Weaver E, Liao HX, Hahn BH, Haynes BF. Centralized immunogens as a vaccine strategy to overcome HIV-1 diversity. *Expert Rev Vaccines.* 2004 Aug;3(4 Suppl):S161-8. [PMID: 15285714](#)
  67. Gao F, Weaver EA, Lu Z, Li Y, Liao HX, Ma B, Alam SM, Scearce RM, Sutherland LL, Yu JS, Decker JM, Shaw GM, Montefiori DC, Korber BT, Hahn BH, Haynes BF. Antigenicity and immunogenicity of a synthetic human immunodeficiency virus type 1 group M consensus envelope glycoprotein. *J Virol.* 2005 Jan;79(2):1154-63. [PMID: 15613343](#)
  68. Ioannidis JP, Tatsioni A, Abrams EJ, Bulterys M, Coombs RW, Goedert JJ, Korber BT, Mayaux MJ, Mofenson LM, Moye J Jr, Newell ML, Shapiro DE, Teglas JP, Thompson B, Wiener J. AIDS, Maternal viral load and rate of disease progression among vertically HIV-1 infected children: an international meta-analysis. *AIDS.* 2004 Jan 4;18(1): 99-108. [PMID: 15090835](#)

Bette Tina Marie Korber

69. Kiepiela P, Leslie AJ, Honeyborne I, Ramduth D, Thobakgale C, Chetty S, Rathnavalu P, Moore C, Pfafferott KJ, Hilton L, Zimbwa P, Moore S, Allen T, Brander C, Addo MM, Altfeld M, James I, Mallal S, Bunce M, Barber LD, Szinger J, Day C, Klenerman P, Mullins J, Korber B, Coovadia HM, Walker BD, Goulder PJ. Dominant influence of HLA-B in mediating the potential co-evolution of HIV and HLA. *Nature*. 2004 Dec 9;432(7018):769-75. [PMID: 15592417](#)
70. Korber BT, Miller CC, Leitner TK. HIV subtypes, Antigenic Diversity, and Vaccine Design. In: Accelerating AIDS Vaccine Development: Challenges and Opportunities. Editors: Patricia Kahn, Wayne Koff, Ian Gust. Caister Academic Press, Norfolk, UK, 2007 (pp 65-75).
71. Kuhmann SE, Pugach P, Kunstman KJ, Taylor J, Stanfield RL, Snyder A, Strizki JM, Riley J, Baroudy BM, Wilson IA, Korber BT, Wolinsky SM, Moore JP. Genetic and phenotypic analyses of HIV-1 escape from a small molecule CCR5 antagonist. *J Virol*. 2004 Mar;78(6):2790-807. [PMID: 14990699](#)
72. Lichterfeld M, Yu XG, Cohen D, Addo MM, Malenfant J, Perkins B, Pae E, Johnston MN, Strick D, Allen TM, Rosenberg ES, Korber B, Walker BD, Altfeld M. HIV-1 Nef is preferentially recognized by CD8 T cells in primary HIV-1 infection despite a relatively high degree of genetic diversity. *AIDS*. 2004 Jul 2;18(10):1383-92. [PMID: 15199314](#)
73. Pugach P, Kuhmann SE, Taylor J, Marozsan AJ, Snyder A, Ketas T, Wolinsky SM, Korber BT, Moore JP. The prolonged culture of human immunodeficiency virus type 1 in primary lymphocytes increases its sensitivity to neutralization by soluble CD4. *J Virol*. 2004 Mar 30;78(1):8-22. [PMID: 15033560](#)
74. Zhang M, Gaschen B, Blay W, Foley B, Haigwood N, Kuiken C, Korber B. Tracking Global Patterns of N-linked Glycosylation Site Variation in Highly Variable Viral Glycoproteins: HIV, SIV, and HCV Envelopes, and Influenza Hemagglutinin. *Glycobiology*. 2004 Dec;14(12):1229-46. [PMID: 15175256](#)
75. Altfeld M, Addo MM, Shankarappa R, Lee PK, Allen TM, Yu XG, Rathod A, Harlow J, O'Sullivan K, Johnston MN, Goulder PJ, Mullins JI, Rosenberg ES, Brander C, Korber B, Walker BD. Enhanced Detection of HIV-1 specific T cell responses to highly variable regions using peptides based on autologous virus sequences. *J Virol*. 2003 Jul;77(13):7330-40. [PMID: 12805431](#)
76. Fan X, Lang DM, Xu Y, Lyra AC, Yusim K, Everhart JE, Korber BT, Perelson AS, Di Bisceglie AM. Liver transplantation with hepatitis C virus-infected graft: interaction between donor and recipient viral strains. *Hepatology*. Jul;38(1):25-33 (2003). [PMID: 12829983](#)

Bette Tina Marie Korber

77. J, Switzer WM, Foley BT, Robertson DL, Goeken RM, Korber BT, Hirsch VM, Beer BE. Characterization and comparison of recombinant simian immunodeficiency virus from drill (*Mandrillus leucophaeus*) and mandrill (*Mandrillus sphinx*) isolates. *J Virol.* 2003 Apr;77(8):4867-80. [PMID: 12663793](#)
78. Jamieson BD, Yang OO, Hultin L, Hausner MA, Hultin P, Matud J, Kunstman K, Killian S, Altman J, Kommander K, Korber B, Giorgi J, Wolinsky S. Epitope Escape Mutations and Decay of HIV-1 Specific CTL responses. *J Immunol.* 2003 Nov 15;171(10):5372-9. [PMID: 14607940](#)
79. Korber BT, Perleson A. Computational Tools to Battle HIV. Los Alamos Science, Celebrating 60 Years, 28:208-214. Editor NG Cooper. Published by Los Alamos National Laboratory, Los Alamos, NM (2003).
80. Kuiken C, Korber B, Shafer RW. HIV sequence databases. *AIDS Rev.* 2003 Jan-Mar;5(1):52-61. [PMID: 12875108](#)
81. Kuntsman KJ, Puffer B, Korber BT, Kuiken C, Smith UR, Kunstman J, Stanton J, Agy M, Shibata R, Yoder AD, Pillai S, Doms RW, Marx P, Wolinsky SM. Structure and function of CC-chemokine receptor 5 homologues derived from representative primate species and subspecies of the taxonomic suborder Prosimii and Anthropoidea. *J Virol.* 2003 Nov;77(22):12310-8. [PMID: 14581567](#)
82. Ohagen A, Devitt A, Kunstman KJ, Gorry PR, Rose PP, Korber B, Taylor J, Levy R, Murphy RL, Wolinsky SM, Gabuzda D. Genetic and functional analysis of full-length HIV-1 env genes derived from brain and blood of AIDS patients. *J Virol.* 2003 Nov;77(22):12336-45. [PMID: 14581570](#)
83. Sabbaj S, Bansal A, Ritter GD, Perkins C, Edwards BH, Gough E, Tang J, Szinger JJ, Korber B, Wilson CM, Kaslow RA, Mulligan MJ, Goepfert PA. Cross-reactive CD8+ T cell epitopes identified in US adolescent minorities. *J Acquir Immune Defic Syndr.* 2003 Aug 1;33(4):426-38. [PMID: 12869831](#)
84. Smith UR, Kuiken C, Korber BT. Recent evolutionary history of human immunodeficiency virus type 1 subtype B--response Letter. *J Mol Evol.* 2003 May;56(5):643-4. [PMID: 12718318](#)
85. Trachtenberg E\*, Korber B\*, Sollars C, Kepler TB, Hraber PT, Hayes E, Funkhouser R, Fugate M, Theiler J, Hsu YS, Kunstman K, Wu S, Phair J, Erlich H, Wolinsky S. Advantage of rare HLA supertype in HIV disease progression. *Nat Med.* 2003 Jul;9(7):928-35. \*These two authors contributed equally to this paper. [PMID: 12819779](#)
86. Altfeld M, Allen TM, Yu XG, Johnston MN, Agrawal D, Korber BT, Montefiori DC, O'Connor DH, Davis BT, Lee PK, Maier EL, Harlow J, Goulder PJ, Brander C, Rosenberg ES, Walker BD. HIV-1 superinfection despite broadly directed

Bette Tina Marie Korber

- CD8+ T cell responses containing replication of the primary virus. *Nature*. 2002 Nov 28;420(6914):434-9. [PMID: 12459786](#)
87. Gaschen B, Taylor J, Yusim K, Foley B, Gao F, Lang D, Novitsky V, Haynes B, Hahn BH, Bhattacharya T, Korber B. Diversity considerations in HIV-1 vaccine selection. *Science*. 2002 Jun 28;296(5577):2354-60 (2002). [PMID: 12089434](#)
88. Kalish ML, Korber BT, Pillai S, Robbins KE, Leo YS, Saekhou A, Verghese I, Gerrish P, Goh CL, Lupo D, Tan BH, Brown TM, Chan R. The sequential introduction of HIV-1 subtype B and CRF01AE in Singapore by sexual transmission: accelerated V3 region evolution in a subpopulation of Asian CRF01 viruses. *Virology*. 2002 Dec 20; 304(2):311-29. [PMID: 12504572](#)
89. Korber B, Kuiken C. Chapter 4: The HIV databases: history, design and function. T. Leitner, ed., Dordrecht, Netherlands: Kluwer Academic Publishers (2002).
90. Krogstad P, Eshleman SH, Geng Y, Jackson JB, Wantman M, Korber B, Lang D, Wiznia A, Johnson G, Nachman S, Palumbo P. Mother-to-child transmission in the United States of subtypes D and A/G human immunodeficiency virus type 1. *AIDS Res Hum Retroviruses*. 2002 Apr 10;18(6):413-7. [PMID: 11958684](#)
91. Lyra AC, Fan X, Lang DM, Yusim K, Ramrakhiani S, Brunt EM, Korber B, Perelson AS, Di Bisceglie AM. Evolution of hepatitis C viral quasispecies after liver transplantation. *Gastroenterology*. 2002 Nov;123:1485-93. [PMID: 12404223](#)
92. Mokili J, Rogers M, Carr JK, Simmonds P, Bopopi JM, Foley BT, Korber BT, Birx DL, McCutchan FE. Identification of a novel clade of human immunodeficiency virus type 1 in Democratic Republic of Congo. *AIDS Res Hum Retroviruses*. 2002 Jul 20;18:817-823. [PMID: 12167273](#)
93. Polycarpou A, Ntais C, Korber BT, Elrich HA, Winchester R, Krogstad P, Wolinsky S, Rostron T, Rowland-Jones SL, Ammann AJ, Ioannidis JP. Association between maternal and infant class I and II HLA alleles and of their concordance with the risk of perinatal HIV-1 transmission. *AIDS Res Human Retroviruses*. 2002 Jul 20;18(11):741-6. [PMID: 12167265](#)
94. Sanders RW, Korber B, Berkhout B, Moore JP. Mutational analyses and natural variability of the gp41 ectodomain. Part I 23-47 in HIV Sequence Compendium 2002. Edited by: Kuiken C, Foley B, Freed E, Hahn B, Korber B, Marx PA, McCutchan F, Mellors JW, Wolinsky S. Published by: Theoretical Biology and Biophysics Group, Los Alamos National Laboratory, Los Alamos, NM (2002).
95. Tang J, Wilson CM, Meleth S, Myracle A, Lobashevsky E, Mulligan MJ, Douglas SD, Korber B, Vermund SH, Kaslow RA. Host genetic profiles predict virological and immunological control of HIV-1 infection in adolescents. *AIDS*. 2002 Nov 22;16:2275-2284. [PMID: 12441799](#)

Bette Tina Marie Korber

96. Yusim K, C Kesmir, MM Addo, M Altfeld, B Gaschen, A Chigaev, V Detours, BT Korber. Clustering patterns of CTL epitopes in HIV-1 proteins reveal imprints of immune evasion on HIV-1 global variation. *J Virol.* 2002 Sep;76(17):8757-68. [PMID: 12163596](#)
97. Beer BE, Foley BT, Kuiken CL, Tooze Z, Goeken RM, Brown CR, Hu J, StClaire M, Korber BT, Hirsch VM. Characterization of novel simian immunodeficiency viruses from red-capped mangabeys from Nigeria (SIVrcmNG409 and -NG411). *J Virol.* 2001 Dec;75(24):12014-27. [PMID: 11711592](#)
98. Gao F, Trask SA, Hui H, Mamaeva O, Chen Y, Theodore TS, Foley BT, Korber BT, Shaw GM, Hahn BH. Molecular Characterization of a Highly Divergent HIV-1 from the Democratic Republic of the Congo in the Early AIDS Epidemic. *AIDS Res Hum Retroviruses.* 2001 Aug 10;17(12):1217-22. [PMID: 11522191](#)
99. Gaschen B, Kuiken C, Korber B, Foley B. Retrieval and on-the-fly alignment of sequence fragments from the HIV database. *Bioinformatics.* May;17(5):415-8. [PMID: 11331235](#)
100. Ioannidis JP, Abrams EJ, Ammann A, Bulterys M, Goedert JJ, Gray L, Korber BT, Mayaux MJ, Mofenson LM, Newell ML, Shapiro DE, Teglas JP, Wilfert CM. Perinatal transmission of human immunodeficiency virus type 1 by pregnant women with RNA virus loads 1000 copies/ml. *J Infect Dis.* 2001 Feb 15;183(4):539-45. [PMID: 11170978](#)
101. Yusim K, Peeters M, Pybus OG, Bhattacharya T, Delaporte E, Mulanga C, Muldoon M, Theiler J, Korber B. Using human immunodeficiency virus type 1 sequences to infer historical features of the acquired immune deficiency syndrome epidemic and human immunodeficiency virus evolution. *Philos Trans R Soc Lond B Biol Sci.* 2001 Jun 29;356(1410):855-66. [PMID: 11405933](#)
102. Korber B. HIV Signature and Sequence Variation Analysis. Computational Analysis of HIV Molecular Sequences, Chapter 4, s 55-72, Rodrigo AG and Learn GH, eds. Dordrecht, Netherlands: Kluwer Academic Publishers (2001).
103. Korber BT, Foley B, Gaschen B, Kuiken C. Epidemiological and Press Inc., Totowa, NJ USA, 2001, in *Retroviral Immunology: Immune Response and Restoration* B. Walker and G. Pantaleo, eds., pp. 1-32 (2001).
104. Korber B, Gaschen B, Yusim K, Thakallapally R, Kesmir C, Detours V. Evolutionary and immunological implications of contemporary HIV-1 variation. In: *The Changing Face of HIV and AIDS*, Editors: Weiss R, Adler M, Rowland-Jones S. Br Med Bull. 2001;58:19-42. [PMID: 11714622](#)

Bette Tina Marie Korber

105. LaBonte ML, Hershberger KL, Korber B, Letvin NL. The KIR and CD94/NKG2 families of molecules in the rhesus monkey. *Immunol Rev.* 2001 Oct;183:25-40. [PMID: 11782245](#)
106. Goulder PJ, Brander C, Tang Y, Tremblay C, Colbert RA, Addo MM, Rosenberg ES, Nguyen T, Allen R, Trocha A, Altfeld M, He S, Bunce M, Funkhouser R, Pelton SI, Burchett SK, McIntosh K, Korber BT, Walker BD. Evolution and transmission of stable CTL escape mutations in HIV infection. *Nature.* 2001 Jul 19;412:334-8. [PMID: 11460164](#)
107. Walker BD, Korber BT. Immune control of HIV: the obstacles of HLA and viral diversity. *Nat Immunol.* 2001 June;2(6):473-5. [PMID: 11376327](#)
108. Zhang YJ, Zhang L, Ketas T, Korber BT, Moore JP. HIV-1 molecular clones are able to use the Bonzo/STRL-33 coreceptor for virus entry. *AIDS Res Hum Retroviruses.* 2001 Feb 10;17:217-227. [PMID: 11177404](#)
109. Korber BT, Muldoon M, Theiler J, Gao F, Gupta R, Lapedes A, Hahn B, Wolinsky S, Bhattacharya T. Search for the origin of HIV and AIDS. *Science.* 2000 289:1140-1141.
110. Korber B, Muldoon M, Theiler J, Gao F, Gupta R, Lapedes A, Hahn BH, Wolinsky S, Bhattacharya T. Timing the ancestor of the HIV-1 pandemic strains. *Science.* 2000 Jun 9;288:1789-96. [PMID: 10846155](#)
111. Robertson DL, Anderson JP, Bradac JA, Carr JK, Foley B, Funkhouser RK, Gao F, Hahn BH, Kalish ML, Kuiken C, Learn GH, Leitner T, McCutchan F, Osmanov S, Peeters M, Pieniazek D, Salminen M, Sharp PM, Wolinsky S, Korber B. HIV-1 nomenclature proposal. *Science.* 2000 Apr 7;288:55. [PMID: 10766634](#)
112. Rose PP, Korber BT. Detecting hypermutations in viral sequences with an emphasis on G --> A hypermutation. *Bioinformatics.* 2000 Apr;16(4):400-401. [PMID: 10869039](#)
113. Brown AJ, Korber BT, Condra JH. Associations between amino acids in the evolution of HIV type 1 protease sequences under indinavir therapy. *AIDS Research and Human Retroviruses.* 1999 Feb 10;15(3):247-253. [PMID: 10052755](#)
114. Korber BT, Sharp PM, Ho DD. Reply to: Dating the origin of HIV-1 subtypes by J. Goudsmit and V. Lukoshov. *Nature.* 1999 Jul 22;400:326.
115. Kostrikis LG, Neumann AU, Thomson B, Korber BT, McHardy P,

Bette Tina Marie Korber

- Karanikolas R, Deutsch L, Huang Y, Lew JF, McIntosh K, Pollack H, Borkowsky W, Spiegel HM, Palumbo P, Oleske J, Bardeguez A, Luzuriaga K, Sullivan J, Wolinsky SM, Koup RA, Ho DD, Moore JP. A polymorphism in the regulatory region of the CC-chemokine receptor 5 gene influences perinatal transmission of human immunodeficiency virus type 1 to African-American infants. *J Virol.* 1999 Dec;73:10264-71. [PMID: 10559343](#)
116. Kuiken CL, Foley BT, Guzman E, Korber BT. Determinants of HIV protein evolution. In: Molecular evolution of HIV. Edited by Keith Crandall, Baltimore, MD: Johns Hopkins University Press (1999).
117. Robertson D, Anderson J, Bradac J, Carr J, Foley B, Funkhouser R, Gao F, Hahn B, Kalish M, Kuiken C, Learn G, Leitner T, McCutchan F, Osmanov S, Peeters M, Pieniazek D, Salminen M, Sharp P, Wolinsky S, Korber BT. HIV-1 Nomenclature Proposal, A Reference Guide to HIV-1 Classification Part IV, 492 in: Human Retro and AIDS 1999: A Compilation and Analysis of Nucleic Acid and Amino Acid Sequences. Editors: Kuiken CL, Foley B, Hahn B, Korber BT, McCutchan F, Marx PA, Mellors JW, Mullins JI, Sodroski J, Wolinsky S, Eds. Theoretical Biology and Biophysics Group, Los Alamos National Laboratory, Los Alamos, NM (1999).
118. The International Perinatal HIV Group. The mode of delivery and the risk of vertical transmission of human immunodeficiency virus type 1 – a meta-analysis of 15 prospective cohort studies. *N Engl J Med.* 1999 Apr 1;340(13):977-87. [PMID: 10099139](#)
119. Wilson CC, Brown RC, Korber BT, Wilkes BM, Ruhl DJ, Sakamoto D, Kunstman K, Luzuriaga K, Hanson IC, Widmayer SM, Wiznia A, Clapp S, Ammann AJ, Koup RA, Wolinsky SM, Walker BD and the Ariel Project Investigators. Frequent detection of escape from cytotoxic T-lymphocyte recognition in perinatal human immunodeficiency virus (HIV) type 1 transmission: the ariel project for the prevention of transmission of HIV from mother to infant. *J Virol.* 1999 May;73(5):3975-85. [PMID: 10196293](#)
120. Zhang L, Ramratnam B, Tenner-Racz K, He Y, Vesinan M, Lewin S, Talal A, Racz P, Perelson AS, Korber BT, Markowitz M, Ho DD. Quantifying residual HIV-1 replication in patients receiving combination antiretroviral therapy. *N Engl J Med.* 1999 May 27;340(21):1605-13. [PMID: 10341272](#)
121. Berger EA, Doms RW, Fenyo EM, Korber BT, Littman DR, Moore JP, Sattentau QJ, Schuitemaker H, Sodroski J, Weiss RA. A new classification for HIV-1. (Scientific Correspondence) *Nature.* 1998 Jan

Bette Tina Marie Korber

- 15;391:240. [PMID: 9440686](#)
122. Brander C, BD Walker, BT Korber. Letter to the editor, response to "Who is Right? Or How to Judge the Disagreement about HLA Restriction of Nef peptides. AIDS Res Hum Retroviruses. 1998 14:91-94.
123. Brander C, Hartman KE, Trocha AK, Jones NG, Johnson RP, Korber B, Wentworth P, Buchbinder SP, Wolinsky S, Walker BD, Kalams SA. Lack of strong immune selection pressure by the immunodominant, HLA-A\*0201-restricted cytotoxic T lymphocyte response in chronic human immunodeficiency virus-1 infection. J Clin Invest. 1998 Jun 1;101(11):2559-66. [PMID: 9616227](#)
124. Connor RI, Korber BT, Graham BS, Hahn BH, Ho DD, Walker BD, Neumann AU, Vermund SH, Mestecky J, Jackson S, Fenamore E, Cao Y, Gao F, Kalams S, Kunstman KJ, McDonald D, McWilliams N, Trkola A, Moore JP, Wolinsky SM. Immunological and virological analyses of persons infected by human immunodeficiency virus type 1 while participating in trials of recombinant gp120 subunit vaccines. J Virol. 1998 Feb;72(2):1552-1576. [PMID: 9445059](#)
125. Frenkel LM, Mullins JI, Learn GH, Manns-Arcuino L, Herring BL, Kalish ML, Steketee RW, Thea DM, Nichols JE, Liu SL, Harmache A, He X, Muthui D, Madan A, Hood L, Haase AT, Zupancic M, Staskus K, Wolinsky S, Krogstad P, Zhao J, Chen I, Koup R, Ho D, Roberts NJ Jr, Korber BT, Apple RJ, Coombs RW, Pahwa S, Bobs NJ. Genetic evaluation of suspected cases of transient HIV-1 infection of infants. Science. 1998 May 15;280(5366):1073-7. [PMID: 9582120](#)
126. Graham BS, McElrath MJ, Connor RI, Schwartz DH, Gorse GJ, Keefer MC, Mulligan MJ, Matthews TJ, Wolinsky SM, Montefiori DC, Vermund SH, Lambert JS, Corey L, Belshe RB, Dolin R, Wright PF, Korber BT, Wolff MC, Fast PE and the AIDS Vaccine Evaluation Group in collaboration with the Correlates of HIV Immune Protection Group. Analysis of intercurrent human immunodeficiency virus type 1 infections in phase I and II trials of candidate AIDS vaccines. J Infect Dis. 1998 Feb;177(2):310-19. [PMID: 9466516](#)
127. Jin X, Roberts CG, Nixon DF, Cao Y, Ho DD, Walker BD, Muldoon M, Korber BT, Koup RA, and the Ariel Project Investigators. Longitudinal and cross-sectional analysis of cytotoxic T lymphocyte responses and their relationship to vertical human immunodeficiency virus transmission. J Infect Dis. 1998 Nov;178(5):1317-26. [PMID: 9780251](#)
128. Korber B, Theiler J, Wolinsky S. Limitations of a molecular clock

Bette Tina Marie Korber

applied to considerations of the origin of HIV-1. *Science*. 1998 Jun 19;280(5371):1868-71. [PMID: 9669945](#)

129. Ondoa P, Willems B, Fransen K, Nkengasong J, Janssens W, Heyndrickx L, Zekeng L, Ndumbe P, Simon F, Saragosti S, Gurtler L, Peeters M, Korber B, Goudsmit J, van der Groen G. Evaluation of different V3 peptides in an enzyme immunoassay for specific HIV type 1 group O antibody detection. *AIDS Res Hum Retroviruses*. 1998 Jul 20;14(11):963-972. [PMID: 9686642](#)
130. Van Dyke RB, Korber BT, Popek E, Macken C, Widmayer SM, Bardeguez A, Hanson IC, Wiznia A, Luzuriaga K, Viscarello RR, Wolinsky S, and the Ariel Core Investigators (Ammann A, Chen I, Gifford A, Ho D, Koup RA, Krogstad P, Muldoon M, Walker B). The Ariel Project: A prospective cohort study of maternal-child transmission of human immunodeficiency virus type 1 in the era of maternal antiretroviral therapy. *J Infect Dis*. 1999 Feb;179(2):1317-26. [PMID: 9878014](#)
131. Zhu T, Korber BT, Nahmias AJ, Hooper E, Sharp PM, Ho DD. An African HIV-1 sequence from 1959 and implications for the origin of the epidemic. *Nature*. 1998 Feb 5;391 (6667):594-596. [PMID: 9468138](#)
132. Cao H, Kanki P, Sankale JL, Korber BT, M'Boup S, Walker BD. CTL cross-reactivity among different HIV-1 Clades: Implications for vaccine development. *J Virol*. 1997 Nov;71(11):8615-23. [PMID: 9343219](#)
133. Cao Y, Krogstad P, Korber BT, Koup RA, Muldoon M, Macken C, Song JL, Jin Z, Zhao JQ, Clapp S, Chen IS, Ho DD, Ammann AJ. Maternal HIV-1 viral load and vertical transmission of infection: the Ariel Project for the prevention of HIV transmission from mother to infant. *Nat. Med.* 1997 May;3(5):549-552. [PMID: 9142125](#)
134. Chen Y, Winchester R, Korber BT, Gagliano J, Bryson Y, Hutto C, Martin N, McSherry G, Petru A, Wara D, Ammann A. Influence of HLA alleles on the rate of progression of vertically transmitted HIV infection in children: association of several HLA DR13 alleles with long term survivorship and HLA-A\*2301 with rapid progression to AIDS. Long-Term Survivor Study. *Hum Immunol*. 1997 Jul;55:154-62. [PMID: 9361967](#)
135. Delwart EL, Pan H, Sheppard HW, Wolpert D, Neumann AU, Korber B, Mullins JI. Slower evolution of HIV-1 quasispecies during progression to AIDS. *J Virol*. 1997 Oct;71(10):7498-508. [PMID: 9311829](#)

Bette Tina Marie Korber

136. Dighe P, Korber BT, Foley B. Global variation of the V3 loop. In: Human Retroviruses and AIDS, eds.: BT Korber, B Foley, T Leitner, F McCutchan, B Hahn, J W Mellors, G Myers, C Kuiken, Theoretical Biology and Biophysics, Part III, Los Alamos National Laboratory, Los Alamos, NM (1997).
137. Ganeshan S, Dickover RE, Korber BT, Bryson YJ, Wolinsky SM. Human immunodeficiency virus type 1 genetic evolution over time in children with different rates of development of disease. *J Virol.* 1997 Jan;71:663-667. [PMID: 8985398](#)
138. Korber BT, Hoelscher M, corresponding authors. HIV-1 subtypes: implications for epidemiology, pathogenicity, vaccines, and diagnostics. Workshop Report from the European Commission (DG XII, INCO-DC) and the Joint United Nations Programme on HIV/AIDS. AIDS vol 11 number 15 UNAIDS17-36 (1997).
139. Leitner T, Korber BT, Robertson D, Gao F, Hahn B. Updated Proposal of Reference Sequences of HIV-1 Genetic Subtypes. In: Human Retroviruses and AIDS, eds., Korber BT, Foley B, Leitner T, McCutchan F, Hahn B, Mellors JW, Myers G, Kuiken C, Part IIIIs 19-26, Theoretical Biology and Biophysics, Los Alamos National Laboratory, Los Alamos, NM (1997).
140. Korber BT, Loussert-Ajaka I, Blouin J, Saragosti S. A comparison of HIV-1 Group M and Group O functional and immunogenic domains in the Gag p24 protein and the C2V3 region of the envelope protein. (Human Retroviruses and AIDS Database 1996 and The HIV Molecular Immunology Database 1996).
141. Learn GH Jr., Korber BT, Foley B, Hahn BH, Wolinsky SM, Mullins JL. Maintaining the integrity of human immunodeficiency virus sequence databases. *J Virol.* 1996 Aug;70:5720-5730. [PMID: 8764096](#)
142. Moore JP, Cao Y, Leu J, Qin L, Korber B, Ho DD. Inter- and intraclade neutralization of human immunodeficiency virus type 1: genetic clades do not correspond to neutralization serotypes but partially correspond to gp120 antigenic serotypes. *J Virol.* 1996 Jan;70(1):427-44. [PMID: 8523556](#)
143. Wolinsky S\*, Korber BT \*, Neumann AU, Daniels M, Kunstman KJ, Whetsell AJ, Furtado MR, Cao Y, Ho DD, Safrit JT. Adaptive evolution of human immunodeficiency virus type 1 during the natural course of infection. *Science.* 1996 Apr 26;272(5261):537-42. \*These two authors contributed equally to the conceptualization, design, and execution of the work presented in this paper. [PMID: 8614801](#)

Bette Tina Marie Korber

144. Wolinsky S, Kunstman K, Ho D, Koup R, Neumann A, Korber BT. Human immunodeficiency virus type 1 evolution and the rate of progression to disease. *Science*. 1996;274:1008.
145. Foley B, Korber BT. Global variation in the HIV-1 V3 region. In: *Human Retroviruses and AIDS* 1995, Part III, 77-135.
146. Haynes BF, Moody MA, Heinley CS, Korber B, Millard WA, Scearce RM. HIV Type 1 V3 region primer-induced antibody suppression is overcome by administration of C4-V3 peptides as a polyvalent immunogen. *AIDS Res Hum Retroviruses*. 1995 Feb;11(2):211-21. [PMID: 7742036](#)
147. Korber BT, Allen EE, Farmer AD, Myers GL. Heterogeneity of HIV-1 and HIV-2. *AIDS*. 1995;9 Suppl A: S5-S18. [PMID: 8819565](#)
148. Korber BT, Learn G, Mullins JI, Hahn BH, Wolinsky S. Protecting HIV Databases. *Nature*. 1995 Nov 16;378(6554):242-4. [PMID: 7477340](#)
149. Loussert-Ajaka I, Chaix ML, Korber B, Letourneur F, Gomas E, Allen E, Ly TD, Brun-Vezinet F, Simon F, Saragosti. The variability of HIV type 1 group O strains isolated from Cameroonian patients living in France. *J Virol*. 1995 Sep;69(9):5640-9. [PMID: 7637010](#)
150. Moore JP, Trkola A, Korber B, Boots LJ, Kessler JA 2nd, McCutchan FE, Mascola J, Ho DD, Robinson J, Conley AJ. A human monoclonal antibody to a complex epitope in the V3 region of gp120 of human immunodeficiency virus type 1 has broad reactivity within and outside clade B. *J Virol*. 1995 Jan;69(1):122-30. [PMID: 7527082](#)
151. Siepel AC, Korber BT. Scanning the database for recombinant HIV-1 Genomes. *Human Retroviruses and AIDS* 1995 Part III, 1-28 (1995).
152. Siepel AC, Halpern AL, Macken C, Korber BT. A computer program designed to rapidly screen for HIV-1 intersubtype recombinant sequences. *AIDS Res. and Human Retroviruses*. 1995 Nov;11(11):1413-1416. [PMID: 8573400](#)
153. Trkola A, Pomales AB, Yuan H, Korber B, Maddon PJ, Allaway GP, Katinger H, Barbas CF 3rd, Burton DR, Ho DD, et al. Cross-clade neutralization of primary isolates of human immunodeficiency virus type 1 by human monoclonal antibodies and tetrameric CD4-IgG. *J Virol*. 1995 Nov;69(11):6609-17. [PMID: 7474069](#)
154. Wolinsky SM, Daniels M, Furtado MH, Bingham JL, Korber B. Viral

Bette Tina Marie Korber

correlates of HIV-1 disease progression. Proceedings of the IX Cent Gardes Colloquium, Paris, France. Girard M, ed., Paris: Pasteur Vaccines IX:95-101 (1995).

155. Korber BT, Kunstman KJ, Patterson BK, Furtado M, McEvilly MM, Levy R, Wolinsky SM. Genetic differences between blood- and brain-derived viral sequences from human immunodeficiency virus type 1-infected patients: evidence of conserved elements in the V3 region of the envelope protein of brain derived sequences. *J Virol.* 1994 Nov;68(11):7467-8. [PMID: 7933130](#)
156. Korber BT, MacInnes K, Smith RF, Myers G. Mutational trends in the V3 loop protein sequences observed in different genetic lineages of human immunodeficiency virus type-1. *J Virol.* 1994 Oct;68:6730-674 [PMID: 8084005](#)
157. Korber BT, Osmanov S, Esparza J, Myers G. The World Health Organization Global Programme on AIDS proposal for standardization of HIV sequence nomenclature. WHO Network for HIV Isolation and Characterization. *AIDS Res Hum Retroviruses.* 1994 Nov;10(11):1355-8. [PMID: 788818](#)
158. Kuiken C, Korber BT. Epidemiological significance of intra- and inter-person variation of HIV-1. *AIDS* 8, 1994 supplement 1:s73-s83.
159. Osmanov S, Belsey L, Heyward W, Esparza J, Bradac J, Galvao-Castro B, Van de Perre P, Karita E, Sempala S, Tugume B, Biryawaho B, Wasi C, Rubsamen-Waigmann H, von Briesen H, Esser U, Grez M, Holmes H, McCutchan FE, Louwagie J, Hegerich P, Lopez-Galindez C, Mullins JI, Delwart EL, Bachmann MH, Goudsmit J, deWolf F, Hahn B, Gao F, Yue L, Saragosti S, Schochetman G, Kalish M, George R, Weber J, Cheingson-Popov R, Kaleebu P, Nara P, Fenyo EM, Albert J, Myers G, Korber BT. HIV-1 variation in WHO-sponsored vaccine evaluation sites: Genetic screening, sequence analyses and preliminary biological characterization of representative viral strains. *AIDS Res Hum Retroviruses.* 1994 Nov;11:1327-1344.
160. Rubsamen-Waigmann H, von Briesen H, Holmes H, Bjorndal A, Korber B, Esser R, Ranjbar S, Tomlinson P, Galvao-Castro B, Karita E, et al. Standard conditions of virus isolation reveal biological variability of HIV type 1 in different regions of the world. WHO Network for HIV Isolation and Characterization. *AIDS Res Hum Retroviruses.* 1994 Nov;10(11):1401. [PMID: 7888193](#)
161. Sabino EC, Shpaer EG, Morgado MG, Korber BT, Diaz RS, Bongertz V, Cavalcante S, Galvao-Castro B, Mullins JI, Mayer A. Identification

Bette Tina Marie Korber

- of human immunodeficiency virus type 1 envelope genes recombinant between subtypes B and F in two epidemiologically linked individuals from Brazil. *J Virol.* 1994 Oct;68(10):6340-6. [PMID: 8083973](#)
162. Haigwood NL, Weiser B, Mason BO, York-Higgins D, Korber BT, Burger H. HIV-1 sequence diversity in long-term asymptomatic patients. In *Cold Spring Harbor Vaccines93: Modern Approaches to New Vaccines Including Prevention of AIDS*, F Brown, RM Chanock, HS Ginsberg, and RA Lerner, eds., New York: Cold Spring Harbor Press, s233-242 (1993).
  163. Korber B, G Myers. Contrasting HIV phylogenetic relationships and V3 loop protein similarities. *Proceedings of the VII Cent Gardes Colloquium*, Paris, France. M Girard and L Valette, eds., Paris: Pasteur Vaccines (1993).
  164. Korber BT, Farber R, Wolpert D, Lapedes A. Covariation of mutations in the V3 loop of the HIV-1 envelope protein: An information theory analysis. *Proc. Natl. Acad. Sci. USA.* 1993 90:7176-7180.
  165. Murphy E, Korber B, Georges-Courbot MC, You B, Pinter A, Cook D, Kieny MP, Georges A, Mathiot C, Barre-Sinoussi F, et al. Diversity of V3 region sequences of human immunodeficiency viruses type 1 from the central African Republic. *AIDS Res Hum Retroviruses.* 1993 Oct;9(10):997-1006. [PMID: 8280481](#)
  166. Myers G, Korber BT. The future of HIV. In: *The Evolutionary Biology of Viruses*. S. Morse, ed., New York: Plenum Press, s211-232 (1993).
  167. Korber B, Myers G. Signature pattern analysis: a method for assessing viral sequence relatedness. *AIDS Res Hum Retroviruses.* 1992 Sep;8(9):1549-60. [PMID: 1457200](#)
  168. Korber BT, Wolinsky S, Myers G. Analysis of inter- and intra-patient variation in the V3 loop of the HIV-1 envelope protein. In: *Vaccines92: Modern Approaches to New Vaccines Including Prevention of AIDS*, F Brown, RM Chanock, HS Ginsberg, and RA Lerner, eds., New York: Cold Spring Harbor Press: 75-80 (1992).
  169. Korber B, Wolinsky S, Haynes B, Kunstman K, Levy R, Furtado M, Otto P, Myers G. HIV-1 intrapatient sequence diversity in the immunogenic V3 region. *AIDS Res Hum Retroviruses.* 1992 Aug;8(8):1461-5. [PMID: 1281659](#)
  170. Myers G, MacInnes K, Korber B. The emergence of simian/human immunodeficiency viruses. *AIDS Res Hum Retroviruses.* 1992

Bette Tina Marie Korber

Mar;8(3):373-86. Review. [PMID: 1571197](#)

171. Okayama A, Korber B, Chen YM, Allan J, Lee TH, Shioiri S, Tachibana N, Tsuda K, Mueller N, McLane MF, et al. Unusual pattern of antibodies to human T-cell leukemia virus type-I in family members of adult T-cell leukemia patients. *Blood*. 1991 Dec 15;78(12):3323-9. [PMID: 1660325](#)
172. Ou C-Y, Ciesielski CA, Myers G, Bandea CI, Luo CC, Korber BT, Mullins JI, Schochetman G, Berkelman RL, Economou AN, et al. Molecular epidemiology of HIV transmission in a dental practice. *Science*. 1992 May 22;256(5060):1165-7. [PMID: 1589796](#)
173. Wike CM, Korber BT, Daniels MR, Hutto C, Munoz J, Furtado M, Parks W, Saah A, Bulterys M, Kurawige JB, et al. HIV-1 sequence variation between isolates from mother-infant transmission pairs. *AIDS Res Hum Retroviruses*. 1992 Jul;8(7):1297-300. [PMID: 1520542](#)
174. Wolinsky SM, Wike CM, Korber BT, Hutto C, Parks WP, Rosenblum LL, Kunstman KJ, Furtado MR, Munoz JL. Selective transmission of human immunodeficiency virus Type I (HIV-1) variants from mothers to infants. *Science*. 1992 Feb 28;255(5048):1134-7. [PMID: 1546316](#)
175. Korber B, Okayama A, Donnelly R, Tachibana N, Essex M. Polymerase chain reaction analysis of defective human T-cell leukemia virus type I proviral genomes in leukemia cells of patients with adult T-cell leukemia. *J Virol*. 1991 Oct;65(10):5471-6. [PMID: 1895396](#)
176. Korber B, Mermod N, Hood L, Stroynowski I. Regulation of gene expression by interferons: Cell type and multi-site control of H-2 promoter responses. *Science*. 1988 Mar 11;239(4845):1302-6. [PMID: 3125612](#)
177. Korber B, Hood L, Stroynowski I. Regulation of murine class 1 genes by interferons is controlled by regions located both 5' and 3' to the transcription initiation site. *Proc Natl Acad Sci USA*. 1987 May;84(10):3380-4. [PMID: 3106967](#)
178. Korber BT, Hood L, Stroynowski I. Regulatory element in the promoter of the H-2D class 1 gene. In: H-2 Antigens, D. Chella, ed., New York: Plenum (1987).